CLAIMS:

1. A wireless network comprising a radio network controller and a plurality of assigned terminals, which are each provided for exchanging data according to the hybrid ARQ method and which form a receiving and/or transmitting side, in which a physical layer of a transmitting side is arranged for

- storing coded transport blocks in a memory, which blocks contain at least a packet data unit which is delivered by the assigned radio link control layer and can be identified by a packet data unit sequence number,
- storing abbreviated sequence numbers whose length depends on the maximum number of coded transport blocks to be stored and which can be shown unambiguously in a packet data unit sequence number, and for
- transmitting coded transport blocks having at least the assigned abbreviated sequence number and

a physical layer of a receiving side is provided for testing the correct reception of the coded transport block and for sending a positive acknowledge command to the transmitting side over a back channel when there is correct reception and a negative acknowledge command when there is error-affected reception.

2. A wireless network as claimed in claim 1, characterized in that the radio network controller and the assigned terminals are provided for exchanging data according to the hybrid ARQ method of type II or III.

3. A wireless network as claimed in claim 1, characterized in that the physical layer of a receiving side is provided for sending a positive or negative acknowledge command with the abbreviated sequence number of the transport block received correctly or affected by error.

4. A wireless network as claimed in claim 1, characterized in that the physical layer of a sending side, after the reception of a positive or negative acknowledge command, is provided for determining the abbreviated sequence number of the respective coded

transport block transmitted correctly or affected by error based on the length of time between transmission of the transport block and reception of the acknowledge command and the sending sequence of the acknowledge command when there is a plurality of received acknowledge commands.

5. A wireless network as claimed in claim 3, characterized in that a transmission of the coded transport blocks is provided in radio frames and in that the transmission of an acknowledge command from the sending side to the receiving side is provided in a subsequent radio frame after the radio frame in which the transmission of the respective coded transport block ends.

6. A wireless network as claimed in claim 4, characterized in that the order of a plurality of acknowledge commands corresponds to the order of the transmission of last parts of transport blocks in a previous radio frame.

7. A wireless network as claimed in claim 1, characterized in that the physical layer of a sending side, upon reception of a positive acknowledge command, is provided for deleting the assigned transport block and the abbreviated sequence number and for announcing the correct reception to the radio link control layer.

8. A wireless network as claimed in claim 1, characterized in that the physical layer of a sending side, upon reception of a negative acknowledge command, is provided for requesting the radio link control layer to transmit a packet data unit that has been transmitted affected by error via the coded transport block and in that the physical layer, upon reception of a packet data unit repeatedly sent by the radio link control layer is provided for forming a coded transport block which contains an incremental redundancy.

9. A radio network controller in a wireless network comprising a plurality of terminals, which radio network controller is provided for exchanging data with the terminals and which forms a receiving and/or transmitting side, in which a physical layer of the radio network controller is arranged as a transmitting side for

- storing coded transport blocks in a memory, which blocks contain at least a packet data unit which is delivered by the assigned radio link control layer and can be identified by a packet data unit sequence number,

- storing abbreviated sequence numbers whose length depends on the maximum number of coded transport blocks to be stored and which can be shown unambiguously in a packet data unit sequence number, and for
- transmitting coded transport blocks having at least the assigned abbreviated sequence number and

a physical layer of the radio network controller is arranged as a receiving side for testing the correct reception of a coded transport block from a terminal and for sending a positive acknowledge command to a terminal over a back channel when there is correct reception and a negative acknowledge command when there is error-affected reception.

10. A terminal in a wireless network comprising further terminals and a radio network controller, which terminal is provided for exchanging data with the terminals and which forms a receiving and/or transmitting side, in which a physical layer of the terminal is arranged as a transmitting side for

- storing coded transport blocks in a memory, which blocks contain at least a packet data unit which is delivered by the assigned radio link control layer and can be identified by a packet data unit sequence number,
- storing abbreviated sequence numbers whose length depends on the maximum number of coded transport blocks to be stored and which can be shown unambiguously in a packet data unit sequence number, and for
- transmitting coded transport blocks to the radio network controller having at least the assigned abbreviated sequence number and

A physical layer of the terminal is arranged as a receiving side for testing the correct reception of a coded transport block from the radio network controller and for sending a positive acknowledge command to the radio network controller over a back channel when there is correct reception and a negative acknowledge command when there is error-affected reception.